

Z-Drive 4500

User Guide



A Toshiba Group Company

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Installation Technical Support

OCZ products include free technical support for direct, expert advice.

For installation technical support, you can contact us by:

Visiting <http://ocz.com/enterprise/support>

Calling OCZ Technical Support at (US toll-free) +1 855 806 6050 or (Europe) +44 1235 822 099 (dial 1 for support)

Emailing us at enterpriseTS@oczenterprise.com

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Welcome!

Your operating system may permit you to use the Z-Drive 4500 as a boot device or as a storage device. This guide contains instructions for:

- [Installation as a boot device in Windows on page 4](#)
- [Installation as a storage device in Windows on page 5](#)
- [Installation as a storage device in Linux on page 7](#)

At OCZ we have one primary goal, and that is to ensure that every customer is 100% satisfied. The Z-Drive 4500 PCIe SSD is an enterprise level product, so you receive direct support from the product management and Applications engineering team. If you have any questions during or after the installation process, please contact our industry-leading Applications engineering team using the details inside the front cover of this guide.

List of items in the Z-Drive 4500 box

- Z-Drive 4500 SSD
- CD containing drivers and this user guide (ISF-UserGuide-ZD4500)

SSD handling precautions

- Store the SSD in the supplied anti-static bag until it is ready for installation
- Electrostatic Discharge (ESD) can permanently damage the Z-Drive 4500: ensure that you are properly grounded before handling the Z-Drive 4500
- do not tamper with the card; doing so voids your warranty
- keep the drive away from direct sunlight, moisture, and extreme temperatures

Supported operating systems

See ocz.com for any updated operating systems support.

The Z-Drive 4500 supports both 32-bit and 64-bit x86 Windows architecture. Please update your operating systems to the latest Service Pack or release. Supported Windows operating systems are:

- Windows Server 2008 R2
- Windows Server 2012 and 2012 R2
- Windows 7
- Windows 8 and 8.1

The Z-Drive 4500 supports the following 64-bit Linux distributions, using the standard kernels for these distributions:

- CentOS 6.0 - 6.4
- Oracle Enterprise Linux 6.0 - 6.4
- Oracle Linux (unbreakable) 5.8 - 6.4
- RedHat Enterprise Linux 6.0 - 6.4
- SUSE Linux Enterprise Server 11 SP1 - SP3
- Ubuntu 10.04 LTS, 12.04 LTS, 12.10, 13.04

Hardware requirements

Z-Drive 4500 minimum hardware requirements are:

- a PCIe Gen2 x8 slot
- a system capable of accommodating a full height, half length PCIe card
- minimum system memory as required by the operating system

For optimal performance, we recommend that you also have:

- a PCIe Gen2 x16 slot
- computer system ambient air temperature of no more than 55° Celsius; for more information on temperature requirements, see the Z-Drive 4500 specifications at ocz.com.

Install the hardware

Before and when handling the Z-Drive 4500, ensure you follow the guidelines in [SSD handling precautions on page 1](#) to prevent damage.

- 1 Locate an available Gen 2 x8 or x16 PCIe slot and carefully seat the drive into the slot.
- 2 Make certain that the drive board seats firmly into the slot. Screw the top of the board bracket into the system to ensure it remains in place.

Driver and firmware requirements

The Z-Drive 4500 is supplied with a CD containing the necessary driver and the OCZ firmware update tools for Windows and Linux. However, we recommend that you install the latest driver and firmware update tool as soon as possible after installation. For more information, see:

- [Managing the Windows device driver and firmware on page 3](#)
- [Managing the Linux device driver and firmware on page 6](#)

Setting up the Z-Drive 4500 in Windows

In Windows, you can do the following:

- [Installation as a boot device in Windows](#)
- [Installation as a storage device in Windows](#)

Before you start, you must ensure you have the necessary driver and firmware update tool: see [Managing the Windows device driver and firmware](#).

Managing the Windows device driver and firmware

The Z-Drive 4500 is supplied with a CD containing the necessary driver and the OCZ firmware update tools for Windows and Linux. However, we recommend that you install the latest driver and firmware update tool as soon as possible after installation. You can update the driver and firmware when needed.

Download the latest driver

- 1 Go to <http://ocz.com/enterprise/download/drivers>.
- 2 Select Z-Drive 4500 from the list of products.
- 3 Find the operating system that is running on your system and download the appropriate driver.
- 4 Unzip the required driver onto a CD or a USB flash drive.

Install or update the driver

- 1 Switch on and start up the computer.
- 2 Insert the CD or USB flash drive with the driver on; see above.
- 3 Navigate to the driver folder and double-click **setup.exe**. The OCZ driver setup wizard starts.
- 4 Click **Next** and follow the instructions to accept the End User License Agreement and install the driver.

Reinstall or remove the driver

You can reinstall or remove the driver when required. To do so:

- 1 Follow the steps above to download the driver to a CD or USB flash drive.
- 2 Navigate to the driver folder and double-click **setup.exe**. The OCZ driver setup wizard starts.
- 3 Click **Next**.
To reinstall the driver, click **Repair**.
To remove the driver, click **Remove**.

Download the latest firmware update tool and firmware

The OCZ firmware update tool automatically installs the latest firmware on your Z-Drive 4500. You can install the firmware tool version supplied on the installation CD, or install the latest version of the tool:

- 1 Go to <http://ocz.com/enterprise/download/firmware>.
- 2 Select the firmware update tool and download to your system.

 You must log on as an administrator when using the OCZ Toolbox.

Update the firmware

You can update the firmware when required. To do so, follow the steps above to install the firmware update tool and see the associated user guide for instructions.

Installation as a boot device in Windows

To set up the Z-Drive 4500 as a boot device in Windows, you:

- 1 [Install the hardware](#); see [page 2](#).
- 2 [Install Windows on the Z-Drive 4500](#).
- 3 [Set the Z-Drive 4500 as a boot device](#).

The following instructions are a general guideline for installation in Windows 7; it is assumed that you have access to the system user manual for full instructions. Installing in other Microsoft operating systems is similar; see your system user manual.

Install Windows on the Z-Drive 4500

- 1 Set the boot order in the system BIOS to boot from the Windows installation CD in the CD drive. For detailed instructions on how to access the BIOS and modify its settings, see the system user manual.
- 2 Boot from the CD and follow the onscreen Windows installation instructions.
- 3 On the **Where do you want to install Windows?** window, if the Z-Drive 4500 is listed, select it and click **Next**.
If the Z-Drive 4500 is not listed, install the driver from [Download the latest driver on page 6](#):
 - o click **Load Driver**
 - o navigate to the driver file on your CD or USB flash drive; for 32-bit operating systems, go to the **i386** folder; for 64-bit systems, go to the **amd64** folder

Once the driver is loaded, the Z-Drive 4500 is listed. Select it and click **Next**.

- 4 Follow the remaining onscreen instructions to complete the installation. Windows may restart your system during the installation.

Set the Z-Drive 4500 as a boot device

To set the Z-Drive 4500 as a boot device, you must change the boot order in the motherboard BIOS. For full instructions on how to access the BIOS and modify its settings, see the system user manual.

Set the Z-Drive 4500 as the primary boot device. Ensure that you save the settings before exiting the BIOS.

Your Z-Drive 4500 is now the boot device.

Installation as a storage device in Windows

To use the Z-Drive 4500 as a storage device in Windows:

- 1 [Install the hardware](#); see [page 2](#).
- 2 [Download the latest driver](#); see [page 3](#).
- 3 [Format the Z-Drive 4500 as storage](#).

The following instructions are a general guideline for installation in Windows 7; it is assumed that you have access to the system user manual for full instructions. Installing in other Microsoft operating systems is similar; see your system user manual.

Format the Z-Drive 4500 as storage

- 1 Switch on and start up the computer.
- 2 Click the Windows **Start** button in the taskbar, right-click **Computer** and select **Manage**. The Computer Management window is shown.
- 3 In the left pane, expand **Storage** then click **Disk Management**. Available disks are listed.
- 4 Select the Z-Drive 4500.
If you have not previously initialized it, wait for the Initialize Disk window to load and click **OK** to initialize it.
If the Z-Drive 4500 is already initialized, go to step 5.
- 5 To format the drive, right click the graphical bar representing unallocated disks and select **New Simple Volume**.
- 6 Follow the onscreen instructions to finish formatting the drive.

Your Z-Drive 4500 is now ready to use for storage.

Setting up the Z-Drive 4500 in Linux

In Linux, you can use the Z-Drive 4500 as a storage device; see [Installation as a storage device in Linux](#).

Before you start, you must ensure you have the necessary driver and firmware update tool: see [Managing the Linux device driver and firmware](#).

Managing the Linux device driver and firmware

The Z-Drive 4500 is supplied with a CD containing the necessary driver and the OCZ firmware update tools for Windows and Linux. However, we recommend that you install the latest driver and firmware update tool as soon as possible after installation. You can update the driver and firmware when needed.

Download the latest driver

- 1 Go to <http://ocz.com/enterprise/download/drivers>.
- 2 Select Z-Drive 4500 from the list of products.
- 3 Find the operating system that is running on your system and download the appropriate driver.
- 4 Unzip the required driver onto a CD or a USB flash drive.

Install the driver in Linux

Full instructions are given in the *Z-Drive R4 and 4500 Linux Device Driver User Guide* (UG-ZDR4-LINUX-DRVR). In summary:

- 1 Copy the appropriate driver package file to a local drive on your system.
- 2 Enter one of the following commands, where *filename* is the name of the package file that you copied:
 - to install an rpm file: **sudo rpm -i filename.rpm**
 - to install a deb file: **sudo dpkg -i filename.deb**

Update, reinstall or remove the driver in Linux

To update, reinstall or remove the Linux driver, follow the instructions in the *Z-Drive R4 and 4500 Linux Device Driver User Guide* (UG-ZDR4-LINUX-DRVR).

Download the latest firmware update tool and firmware

The OCZ firmware update tool automatically installs the latest firmware on your Z-Drive 4500. You can install the firmware tool version supplied on the installation CD, or install the latest version of the tool:

- 1 Go to <http://ocz.com/enterprise/download/firmware>.
- 2 Select the firmware update tool and download to your system.

 You must log on as an administrator when using the OCZ Toolbox.

Update the firmware

You can update the firmware when required. To do so, follow the steps above to install the firmware update tool and see the associated user guide for instructions.

Installation as a storage device in Linux

To use the Z-Drive 4500 as a storage device in Linux:

- 1 [Install the hardware](#); see [page 2](#).
- 2 [Install the driver in Linux](#); see [page 6](#).
- 3 [Format the Z-Drive 4500 as storage](#).

The following instructions are a general guideline for installation in RHEL; it is assumed that you have access to the system user manual for full instructions. Installing in other Linux distributions is similar; see your system user manual.

Format the Z-Drive 4500 as storage

- 1 Switch on and start up the computer.
- 2 Go to **Applications - System Tool - Disk Utility**. The Disk Utility window is shown.
- 3 In the list of storage devices, click the Z-Drive 4500. Drive and volume details are shown.
- 4 In the drive details section, click **Format Drive**. The Format window is shown.
- 5 To format the drive, select Master Boot Record (or the relevant format scheme for your usage) and click **Format**. A message is shown asking you to confirm the format.
- 6 Click **Format**. When the drive is formatted, the Disk Utility window is shown again.
- 7 To create any partitions you want, in the Volumes section, click **Create Partition**. The Create Partition window is shown.
- 8 Use the slider or enter a value to set the size for the partition, select the file system type and enter a name. Click **Create**. The partition is created and details are shown in the Disk Utility window.

Your Z-Drive 4500 is now ready to use for storage.

Prolonging the Life of Your Z-Drive 4500

To prolong the life of your Z-Drive 4500, you can disable defragmentation.

Defragmentation of hard disks can make their operation more efficient, by writing related data to contiguous spaces on the disk and reducing the distance the disk head has to travel when reading or writing data. However flash-based SSDs do not gain performance improvements from defragmentation, as the increased number of writes shortens the lifespan of the Z-Drive 4500.

To check whether defragmentation is set, and to disable the Disk Defragmentation Scheduler (example instructions for Windows 7):

- 1 Click the Windows **Start** button in the taskbar and type **Disk Defragmenter** in the search field.
- 2 In the list of search results shown, click **Disk Defragmenter**. The Disk Defragmenter window is shown.
- 3 To check whether defragmentation is scheduled, click **Configure Schedule**. A window is shown with any details of the schedule.
- 4 Uncheck (delete the tick from) **Run on a schedule** then click **OK**. The Disk Defragmenter window shows that the defragmentation schedule is off.

Limited Warranty

OCZ products epitomize the vanguard of quality standards as part of our commitment to our customers. All OCZ products are warranted and tested to be free from defects in material and workmanship and to conform to the published specifications. If your OCZ product fails within the warranty period (under normal use in the recommended environment) due to improper workmanship or materials, OCZ will repair the product or replace it with a comparable or better unit. This warranty is subject to the conditions and limitations set forth herein.

Duration of warranty

The OCZ Z-Drive 4500 is covered by this warranty for 5 years from the date of purchase. Proof of purchase, including the date of purchase, is required to collect on the warranty. OCZ will inspect the product and decide whether to repair or replace it. OCZ reserves the right to provide a functional equivalent product or a refurbished replacement product.

Limitations

This warranty does not apply to product failure caused by accidents, abuse, mishandling, improper installation, alteration, acts of nature, improper use, or problems with electrical power. In addition, opening or tampering with the product casing, or any physical damage, abuse or alteration to the product's surface, including all warranty or quality stickers, product serial or electronic numbers void the product warranty. OCZ is not responsible for recovering any data lost due to the failure of a flash memory device. OCZ products must be used with devices that conform to the recommended industry standards. OCZ is not liable for damages resulting from a third party device that causes the OCZ product to fail. OCZ is in no event liable for any consequential, indirect or incidental damages, lost profits, lost business investments, lost goodwill or interference with business relationships as a result of lost data. OCZ is not responsible for damage or failure of any third party equipment, even if OCZ has been advised of the possibility. This limitation does not apply to the extent making it illegal or unenforceable under applicable law.

